

## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
WO 2004/107971 A2

(51) International Patent Classification<sup>7</sup>:

A61B 5/00

(74) Agents: FENSTER, Paul et al.; FENSTER & COMPANY, INTELLECTUAL PROPERTY 2002 LTD., P. O. Box 10256, 49002 Petach Tikva (IL).

(21) International Application Number:

PCT/IL2004/000483

(22) International Filing Date:

8 June 2004 (08.06.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/476,623 9 June 2003 (09.06.2003) US

(71) Applicant (for all designated States except US): GLUCON INC. [US/US]; C/O HOGAN & HARTSON, 555 Thirteenth Street NW, Columbia Square, WA, District of Columbia 20004-1109 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PESACH, Benny [IL/IL]; 18 Shir Hashirim Street, 48072 Rosh-Ha'Yin (IL). NAGAR, Ron [IL/IL]; 32 Frug Street, 63417 Tel-Aviv (IL). ASHKENAZI, Shai [IL/IL]; 74 Beeri Street, 76351 Rehovot (IL). PESACH, Gidon [IL/IL]; 16 Fishman Mimon Street, 64236 Tel-Aviv (IL). ADORAM, Avner [IL/IL]; 18B Weizman Avenue, 47211 Ramat Hasharon (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

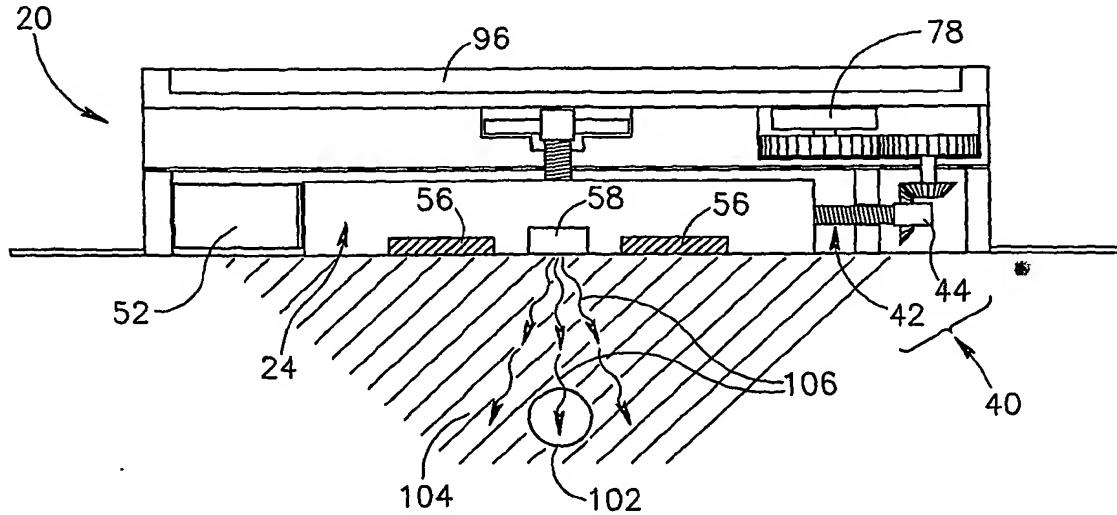
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: WEARABLE GLUCOMETER



(57) Abstract: Apparatus for assaying an analyte of blood in a patient's blood vessel comprising: a mounting module adapted so that it can be adhered to the skin of the patient overlying a tissue region comprising the blood vessel; a sensor unit mounted to the module that generates signals responsive to characteristics of the tissue region; and a controller that receives the signals and uses received signals to assay the analyte and to determine a degree to which the sensor unit is aligned with the blood vessel.

WO 2004/107971 A2

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date  
16 December 2004 (16.12.2004)

PCT

(10) International Publication Number  
WO 2004/107971 A3

(51) International Patent Classification<sup>7</sup>: A61B 5/00

(21) International Application Number:  
PCT/IL2004/000483

(22) International Filing Date: 8 June 2004 (08.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/476,623 9 June 2003 (09.06.2003) US

(71) Applicant (for all designated States except US): GLUCON INC. [US/US]; C/O HOGAN & HARTSON, 555 Thirteenth Street NW, Columbia Square, WA, District of Columbia 20004-1109 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): PESACH, Benny [IL/IL]; 18 Shir Hashirim Street, 48072 Rosh-Ha'Ayin (IL). NAGAR, Ron [IL/IL]; 32 Frug Street, 63417 Tel-Aviv (IL). ASHKENAZI, Shai [IL/IL]; 74 Beeri Street, 76351 Rehovot (IL). PESACH, Gidon [IL/IL]; 16 Fishman Mimon Street, 64236 Tel-Aviv (IL). ADORAM, Avner [IL/IL]; 18B Weizman Avenue, 47211 Ramat Hasharon (IL).

(74) Agents: FENSTER, Paul et al.; FENSTER & COMPANY, INTELLECTUAL PROPERTY 2002 LTD., P. O. Box 10256, 49002 Petach Tikva (IL).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

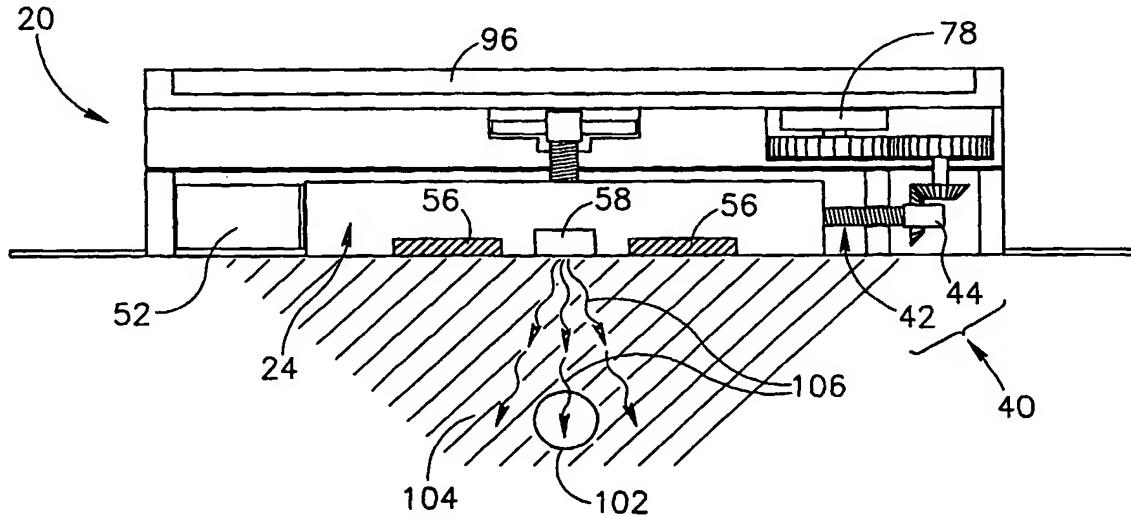
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: WEARABLE GLUCOMETER



WO 2004/107971 A3

(57) Abstract: Apparatus for assaying an analyte of blood in a patient's blood vessel comprising: a mounting module adapted so that it can be adhered to the skin of the patient overlying a tissue region comprising the blood vessel; a sensor unit mounted to the module that generates signals responsive to characteristics of the tissue region; and a controller that receives the signals and uses received signals to assay the analyte and to determine a degree to which the sensor unit is aligned with the blood vessel.



(88) Date of publication of the international search report:  
3 February 2005

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*